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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,474	09/30/2003	Klimenty Vainstein	SSL1P021/SS-041	7534

7590 02/09/2007

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EXAMINER	
PALIWAL, YOGESH	
ART UNIT	PAPER NUMBER
2109	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,474	VAINSTEIN ET AL.	
	Examiner	Art Unit	
	Yogesh Paliwal	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 September 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figure 3 is objected to because of following miner informalities: "STATE C" referred by drawing numeral 308 should be changed to "STATE D". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: On page 1, Cross-Reference application (i) is identified using attorney docket number. Specification must be updated with the US serial number for the pending application. Appropriate correction is required.

Claim Objections - 37 CFR 1.75(a)

3. The following is a quotation of 37 CFR 1.75(a):

> The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

Claim 17 is objected to under 37 CFR 1.75(a), as failing to particularly point out and distinctly claim the subject matter which application regards as his invention or discovery.

Claim 17, lines 1-2 recite, "wherein the security-policy state machine is provided or part of a document security system".

However, it is not clear from the claim what is meant by "is provided or part of a"? In light of the corresponding written description of the invention, and for purposes of examination, the following interpretation of claim 17, lines 1-2 will be assumed: "wherein the security-policy state machine is provided ~~or~~ as part of a document security system"

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.
>
> Claims that recite nothing but the physical characteristics of a form of energy, such as a frequency, voltage, or the strength of a magnetic field, define energy or magnetism, per se, and as such are nonstatutory natural phenomena. O'Reilly, 56 U.S. (15 How.) at 112-14. Moreover, it does not appear that a claim reciting a signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in Sec. 101.
>
> ... a signal does not fall within one of the four statutory classes of Sec. 101.
>
> ... signal claims are ineligible for patent protection because they do not fall within any of the four statutory classes of Sec. 101.

Claims **1-20** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Although Claims 1-20 are directed towards system and method of providing document security system, the specification provides intrinsic evidence that these claims are directed towards software alone. System and method as claimed in 1-20 are nothing more then software modules doing different tasks of the claimed system or method.

Claims 1-20 defines a system and method embodying functional descriptive material. However, the claims do not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally

interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed system and method can range from paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable storage medium" or equivalent in order to make the claim statutory. Any amendment to the claim should be commensurate with its corresponding disclosure.

Examiner further would like to point out that just adding "computer-readable medium" will not be sufficient to make these claims statutory because the specification, at page 24 defines the claimed computer readable medium as encompassing statutory media such as a "read-only memory", "random-access memory", "DC-ROMs", "DVDs", "magnetic tape", ""optical data storage devices", etc as well as ***non-statutory*** subject mater such as a "carrier waves" (which is a form of signal). [For more on why signals are not-statutory subject mater please refer to the rejection of claims 27 and 28 bellow]

Claims **27 and 28** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 28 and 28 are drawn to functional descriptive material recorded on a computer-readable medium. Normally, the claim would be statutory. However, the specification, at page 24 defines the claimed computer readable medium as encompassing statutory media such as a "read-only memory", "random-access memory", "DC-ROMs", "DVDs", "magnetic tape",

""optical data storage devices", etc as well as ***non-statutory*** subject mater such as a "carrier waves" (which is a form of signal).

A "signal" embodying functional descriptive material is neither a process nor a product (i.e., a tangible "thing") and therefore does not fall within one of the four statutory classes of § 101. Rather, "signal" is a form of energy, in the absence of any physical structure or tangible material.

Because the full scope of the claim as properly read in light of the disclosure encompasses non-statutory subject matter, the claim as a whole is non-statutory. The examiner suggests amending the claim to *include* the disclosed tangible computer readable media, while at the same time *excluding* the intangible media such as signals, carrier waves. Any amendment to the claim should be commensurate with its corresponding disclosure.

Examiner suggests following claim language when claiming computer program under statutory category: A computer readable "storage" medium including at least computer program code, which when executed by the processor causes the computer to...(followed by method).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims **1-9, 14-17 and 27** are rejected under 35 U.S.C. 102(e) as being anticipated by Bhide et al. (US 20040117371).

Regarding **Claim 1**, Bhide discloses:

A document security system for restricting access to documents **(Paragraph 0001 lines 1-2, "The invention relates the execution of event-based database access requests)** said document security system comprising:

at least one process-driven security policy that includes a plurality of states and transition rules, **(Figure 1, Numerals 20 and 18, Paragraph 0021 lines 1-3, "The event part 12 represents the condition that triggers the enforcement of the access control privileges specified in the access enforcement part 20 of the policy", Also at Paragraph 0003 lines 4-12, "In an event-based access control system, contingent access policies are used. Key to an event-based access control system is the idea of multiple states, Event triggers state transitions.")**

each of the states having corresponding one or more access restrictions **(Paragraph 0025 lines 1-2, "The access enforcement part 20 represents the access control actions")** and the transition rules specify when the secured document is to transition from one state to another **(Paragraph 0023, lines 1-4, "The condition evaluation 16 defines the conditions that need to hold true after the event occurrence for the access enforcement 20 to be executed")**

an access manager that determines whether access to a secured document is permitted by a requestor based on the state and the corresponding one or more access restrictions thereof for said process-driven security policy **(Paragraph 0031 lines 3-10, "The Execution Model detects the occurrence of events. It also checks the truth-value of the conditions attached to the policies and depending on the truth-value, it executes the inference rules 18 as well as the access enforcement part 20 of the policy 10. The access Validation model 46, provides an interface to the end-user 52 to access data from the underlying databases or information repositories 54")**

Regarding **Claim 2,** the rejection of claim 1 is incorporated and further Bhide discloses that the corresponding one or more access restrictions for access to the secured document are automatically changed when the state of said process-driven security policy for the secured document changes. **(Paragraph 0025 lines 1-5, "The access enforcement part 20 represents the access control actions that are executed if an event occurs and the associated conditions evaluate to true)**

Regarding **Claim 3,** the rejection of claim 1 is incorporated and further Bhide discloses that events cause the state of said process-driven security policy for the secured document to automatically transition between states **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that triggers the enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")**

Regarding **Claim 4**, the rejection of claim 3 is incorporated and further Bhide discloses that the events are internal or external events with respect to said document

security system **(Paragraph 0021, lines 5-7, "Different kinds of events are supported including temporal events, database events and events external to the system")**

Regarding **Claim 5**, the rejection of claim 4 is incorporated and further Bhide discloses that at least one of the events is an external event from a document management system **(Paragraph 0021, lines 5-7; "Different kinds of events are supported including temporal events, database events and events external to the system")**

Regarding **Claim 6**, the rejection of claim 1 is incorporated and further Bhide discloses that one or more of the corresponding one or more access restrictions for access to the secured document remain intact when the state of said process-driven security policy for the secured document changes **(Paragraph 0103 lines 1-4, "whenever any entry is made in Leave Database automatically the above policy is executed and the access rights of the employee on confidential data are disabled") [access rights are remain intact so when leave flag clears and state changes, access rights can be restored]**

Regarding **Claim 7**, the rejection of claim 1 is incorporated and further Bhide discloses that events cause the state of said process-driven security policy to automatically transition between states **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that triggers the enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")**

wherein said process-driven security policy includes at least a first state, a second state, and a third state, and wherein a first event causes transition from the first state to the second state, and a second event causes transition from the second state to a third state **(Paragraphs 0111, 0112, 0113, 0114)** *[Paragraph 0112 is the first state, paragraph 0113 is the second state and Paragraph 0114 is the third state, first event that causes transition from first to second state is "if the user has done business greater then $10,000" (paragraph 0113), and second event that causes transition from second to third state is "if the user has done business greater then $50,000 (paragraph 0114)"]*

Regarding **Claim 8**, the rejection of claim 1 is incorporated and further Bhide discloses that events cause the state of said process-driven security policy to automatically transition between states **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that triggers the enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")**

wherein said process-driven security policy includes at least a first state and a second state, and wherein a first event causes transition from the first state to the second state. **(Paragraphs 0099, 0101 and 0103)** *[First state is when employee has access rights to confidential documents, second state is when employee does not have access rights to confidential documents, first event that causes transition from the first state to the second state is "When an employee goes on leave" (paragraph 0101)]*

Regarding **Claim 9**, the rejection of claim 1 is incorporated and further Bhide discloses that transition rules are based on events **(Paragraph 0023, lines 1-4, "The**

condition evaluation 16 defines the conditions that need to hold true after the event occurrence for the access enforcement 20 to be executed")

Regarding **Claim 14**, Bhide discloses:

A method for transitioning at least one secured document through a security-policy state machine having a plurality of states **(Paragraph 0018 lines 1-4, "A method...for the execution of event-based access control with support for inference of access rights")**, said method comprising:

(a) receiving an event **(paragraph 0021 lines 1-5, "the event part 12...")**

(b) determining whether the event causes a state transition for the at least one secured document from a former state to a subsequent state of the security-policy state machine **(Paragraph 0024 lines 1-3, "The condition evaluation 16 defines the conditions that need to hold true after the event occurrence for the access enforcement 20 to be executed", at paragraph 0024 lines 1-3, "The access enforcement part represents the access control actions [states] that are executed if an event occurs and the associated conditions evaluate to true")**

(c) automatically transitioning from the former state to the subsequent state of the security-policy state machine when said determining (b) determines that the event causes the state transition **(Paragraph 0003 lines 4-12, "In an event-based access control system, contingent access policies are used. Key to an event-based access control system is the idea of multiple states, Event triggers state transitions.")**

Regarding **Claim 15**, the rejection of claim 14 is incorporated and Bhide further discloses that the security-policy state machine implements a process-driven security policy, wherein each state of the security-policy state machine has different access restrictions **(Page 2, table 2, column 4 "Access Enforcement", first access restriction is "Grant access to the stock...gold customer" and second access restriction is "If the parameter value > $1000 grant the user access...")**

Regarding **Claim 16**, the rejection of claim 14 is incorporated and Bhide further discloses each of the states of the security-policy state machine have different access policies **(Page 2, table 2, column 4 "Access Enforcement", for first state, access policy is " access to the stock analysis data for the last six months " and for second state, access policy is "grant the user access to the stock analysis data for the last 1 month")**

Regarding **Claim 17**, the rejection of claim 16 is incorporated and further Bhide discloses that the security-policy state machine is provided ~~of~~ as part of a document security system **(Paragraph 0030, line 3, "Definition and Deployment Model")**, and wherein the different access policies of the security-policy state machine are enforced by the document security system **(Paragraph 0031, lines1-3, "The definition and Deployment Model 42 is used for the definition of the access control policy 10 and its deployment as a component 48 within the database 50").**

Regarding **Claim 27**, Bhide discloses a computer readable medium including at least computer program code **(Paragraph 0018, line 1-2, "Computer program product")** for transitioning at least one secured document through a security-policy

state machine having a plurality of states, said computer readable medium comprising: computer program code for receiving an event; computer program code for determining whether the event causes a state transition for the at least one secured document from a former state to a subsequent state of the security-policy state machine; and computer program code for automatically transitioning from the former state to the subsequent state of the security-policy state machine when said computer program code for determining determines that the event causes the state transition **(Rejected under the same rationale as claim 14)**

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bhide et al. (US 2004/0117371) in view of Smith et al. (US 2003/0217333).

Regarding **Claim 10**, the rejection of claim 9 is incorporated. Bhide does not teach that the transition rules are written in XML.

However, Smith et al. in the same field of endeavor of network security discloses that rules are written in XML **(paragraph 0032, line 2, "rules may be written in an XML format")**

Therefor, it would have been obvious at the time the invention was made to one of ordinary skill in the art to write the transition rules of Bhide in XML as taught by Smith because *"XML schemas may be parsed in real-time, allowing for the real-time modification of the rules"* **(Smith, paragraph 0032, lines 4-6)**

Claims **11-13 and 18-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhide et al. (US 2004/0117371) in view of Dilkie et al. (US 6341164).

Regarding **Claim 11**, the rejection of claim 1 is incorporated and Bhide further discloses that events cause the state of said process-driven security policy for the secured document to transition from a previous state to a current state **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that triggers the enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")**

Bhide does not teach that the secured document is modified when said process-driven security policy for the secured document transitions from the previous state to the current state.

However, Dilkie in the same field of endeavor of data security systems discloses modifying the secured document **(Column 3 lines 24-25, "...re-encrypts the encrypted data with a different encryption process...")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the secured document as taught by Dilkie when the security policy for the secured document transitions from the previous state to the

current state as taught by Bhide to *"re-encrypt the encrypted data with a different encryption process in response to detected improper encryption key usage"* **(Dilkie, Column 3 lines 24-25)**

Regarding **Claim 12**, the rejection of claim 11 is incorporated and Dilkie further discloses that the secured document includes at least a security information portion **(Column 3, lines 62-63, "The cryptographic key package information is preferably contained as header data")** and an encrypted data portion **(column 4, lines 7-8, "the encrypted message data with the header data")** information portion including at least an encrypted key **(Column 4 lines 1-3, "A cryptographic key package may include, for example, a symmetric encryption key wrapped, or encrypted, with an asymmetric encryption key, such as a recipient's public key...")**, and the key being encrypted must be decrypted in order to decrypt the encrypted data portion **(Column 7 lines 46-50, "The corresponding private key (for example, signing key) is used to unwrap the cryptographic key package to recover a message encryption key as known in the art. The system may re-encrypt the key package with a different asymmetric key and/or algorithm as shown in block 409. The analyzer 103 may then decrypt the message data in any suitable manner using the message encryption key as shown in block 410".)**

The combination as applied in above rejection of claim 11, does not teach that when said process-driven security policy for the secured document transitions from the previous state to the current state, the secured document is modified by decrypting the

encrypted key and then re-encrypting the key, whereby the key is encrypted differently for the current state than the previous state.

However Dilkie, in the same reference further discloses that the secured document is modified by decrypting the encrypted key and then re-encrypting the key, whereby the key is encrypted differently for the current state than the previous state **(column 8, lines 11-18, "incoming message is encrypted under algorithm X with symmetric key Y wrapped (encrypted) with asymmetric key Z, the system may decrypt asymmetrically to recover the symmetric key Y, and re-encrypt the symmetric key Y with a different asymmetric key Z' and replace the previous cryptographic key package with the new re-encrypted key data forming a new cryptographic key package in the header")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the secured document by decrypting the encrypted key and then re-encrypting the key as taught by Dilkie when document transit from one state to another state as taught by Bhide to re-encrypt the *"header without re-encrypting the file itself, thereby only changing the wrapping on the header key"* **(Dilkie, column 8, lines 19-21)**

Regarding **Claim 13**, the rejection of claim 11 is incorporated and further Bhide discloses that if permitted, access to the secured document is available at a client machine (Paragraph 0031, lines 8-10, **"The access Validation model 46, provides an interface to the end-user 52 to access data from the underlying databases or information repositories 54")**

Regarding **Claim 18**, the rejection of claim 14 in incorporated. Bhide does not teach modifying the secured document to reflect the subsequent state of the security-policy state machine.

However, Dilkie in the same field of endeavor of data security systems discloses modifying the secured document **(Column 3 lines 24-25, "...re-encrypts the encrypted data with a different encryption process...")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the secured document as taught by Dilkie when the security policy for the secured document transitions from the previous state to the current state as taught by Bhide to *"re-encrypt the encrypted data with a different encryption process in response to detected improper encryption key usage"* **(Column 3 lines 24-25)**

Regarding **Claim 19**, the rejection of claim 14 is incorporated. Bhide does not teach retrieving an encrypted file key from the secured document; decrypting, if permitted by the former state of the security-policy state machine, the encrypted file key to yield a file key; subsequently encrypting the file key in accordance with the subsequent state of the security-policy state machine; and storing the secured document, the secured document including at least an encrypted data portion and the subsequently encrypted file key.

However, Dilkie discloses a method of retrieving an encrypted file key from the secured document; decrypting, if permitted by the former state of the security-policy state machine, the encrypted file key to yield a file key; subsequently encrypting the file

key in accordance with the subsequent state of the security-policy state machine; and storing the secured document, **(column 8, lines 11-18, "incoming message is encrypted under algorithm X with symmetric key Y wrapped (encrypted) with asymmetric key Z, the system may decrypt asymmetrically to recover the symmetric key Y, and re-encrypt the symmetric key Y with a different asymmetric key Z' and replace the previous cryptographic key package with the new re-encrypted key data forming a new cryptographic key package in the header. The message data with the new cryptographic key package may then be stored")** the secured document including at least an encrypted data portion **(column 4, lines 7-8, "the encrypted message data with the header data")** and the subsequently encrypted file key **(Column 3, lines 62-63, "The cryptographic key package information is preferably contained as header data")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the secured document by decrypting the encrypted key and then re-encrypting the key as taught by Dilkie when document transit from one state to another state as taught by Bhide to re-encrypt the *"header without re-encrypting the file itself, thereby only changing the wrapping on the header key"* **(Dilkie, column 8, lines 19-21)**

Regarding **Claim 20**, the rejection of claim 14 is incorporated. Bhide does not teach a method of retrieving an encrypted file key from the secured document; obtaining a private state key associated with the former state of the security-policy state machine; decrypting the encrypted file key using the private file key; obtaining a public state key

associated with the subsequent state of the security-policy state machine; subsequently encrypting the file key in accordance with the public state key; and storing the secured document, the secured document including at least an encrypted data portion and the subsequently encrypted file key.

However, Dilkie discloses a method of retrieving an encrypted file key from the secured document; obtaining a private state key associated with the former state of the security-policy state machine; decrypting the encrypted file key using the private file key; obtaining a public state key associated with the subsequent state of the security-policy state machine; subsequently encrypting the file key in accordance with the public state key; and storing the secured document, **(column 8, lines 11-18, "incoming message is encrypted under algorithm X with symmetric key Y wrapped (encrypted) with asymmetric key Z, the system may decrypt asymmetrically to recover the symmetric key Y, and re-encrypt the symmetric key Y with a different asymmetric key Z' and replace the previous cryptographic key package with the new re-encrypted key data forming a new cryptographic key package in the header. The message data with the new cryptographic key package may then be stored")** the secured document including at least an encrypted data portion **(column 4, lines 7-8, "the encrypted message data with the header data")** and the subsequently encrypted file key **(Column 3, lines 62-63, "The cryptographic key package information is preferably contained as header data")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the secured document by decrypting the encrypted

key and then re-encrypting the key as taught by Dilkie when document transit from one state to another state as taught by Bhide to re-encrypt the *"header without re-encrypting the file itself, thereby only changing the wrapping on the header key"* **(column 8, lines 19-21)**

Claims **21-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhide et al. (US 2004/0117371) in view of Moriconi et al. (US 6941472), and further in view of DeTreville (US 2004/0098580).

Regarding **Claim 21**, Bhide discloses a method for imposing access restrictions on electronic documents, said method comprising:

providing at least one process-driven security policy **(Figure 1, Numeral 20, Paragraph 0021 lines 1-3, "access control privileges specified in the access enforcement part 20 of the policy")** at a server machine **(Paragraph 0030, line 1, "A database system")**

the process-driven security policy having a plurality of states associated therewith, each of the states having distinct access restrictions **(Paragraph 0003 lines 4-12, "In an event-based access control system, contingent access policies are used. Key to an event-based access control system is the idea of multiple states, Event triggers state transitions.")**

transitioning the process-driven security policy from one state to a current state **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that**

triggers the enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")

and subsequently determining at the server computer whether a requestor is permitted to access the electronic document, the access being based on a current state of the process-driven security policy **(Paragraph 0031 lines 3-10, "The Execution Model detects the occurrence of events. It also checks the truth-value of the conditions attached to the policies and depending on the truth-value, it executes the inference rules 18 as well as the access enforcement part 20 of the policy 10. The access Validation model 46, provides an interface to the end-user 52 to access data from the underlying databases or information repositories 54")**

Bhide does not teach providing a reference to the process-driven security policy at a client machine, the reference referring to the process-driven security policy resident on the server machine; associating the reference to an electronic document

However, Moriconi in the same field of endeavor of secure distribution system disclosed a method of providing a reference to the process-driven security policy at a client machine, the reference referring to the process-driven security policy resident on the server machine **(Column 5, lines 22-24, "A policy manager located on a server for managing and distributing a policy to a client")** associating the reference to an electronic document **(Column 5, lines 24-26, "an application guard located on the client, the application guard acting to grant or deny access to various components of the client, as specified by the policy")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to provide a reference to the client machine, as taught by Moriconi, of the process-driven security policy, as taught by Bhide so that *"central policy server automatically distributes (over the network) only the relevant portion of the enterprise policy to each remote service"* **(Moriconi, Column 4, lines 12-14)**

The combination of Bhide and Sames does not teach that the current state being informed to the server computer by sending the reference to the server computer.

However, Detreville in the same field of endeavor of digital rights management system, discloses that the current state being informed to the server computer by sending the reference to the server computer **(Paragraph 0024, lines 1-4, "When analyzing license 304, access control module 316 may request current state information from state server 310. In response to this request, state server 310 may transmit current state information 320 to access control module 316")**

Therefore, it would have been obvious at the time the invention was made to one of ordinary skill in the art to send a reference of the current state information about the document, as taught by Detreville, to the authentication server as taught by Bhide to *" evaluate whether one or more conditions included in license 304 have been satisfied"* (Detreville, Paragraph 0024, lines 6-7).

Regarding **Claim 22**, the rejection of claim 21 is incorporated and further Bhide discloses that transitioning is automatically performed based on events **(Paragraph 0021 lines 1-4, "The event part 12 represents the condition that triggers the**

enforcement of the access control privileges", also at paragraph 0003, line 7, "Event triggers state transitions")

Regarding **Claim 23**, the rejection of claim 21 is incorporated and further Bhide discloses that transitioning is performed at the server machine. **(Paragraph 0030, "A database system...three parts- the definition and deployment part 42, the execution model 44 and the access validation model 46", Paragraph 0031, lines 6-8, "...depending on the truth-value, it executes the inference rules 18 as well as the access enforcement part 20 of the policy 10")**

Regarding **Claim 24**, the rejection of claim 21 is incorporated and further Moriconi discloses that associating associates the reference to a group of documents **(Column 5, lines 24-26, "an application guard located on the client, the application guard acting to grant or deny access to various components [group of documents] of the client, as specified by the policy")**

Regarding **Claim 25**, the rejection of claim 21 is incorporated and further Moriconi discloses that method pertains to a group of electronic documents, and wherein all of the electronic documents of the group are always in the same state of the process-driven security policy **(Column 5, lines 24-26, "an application guard located on the client, the application guard acting to grant or deny access to various components [group of documents] of the client, as specified by the policy") [at any given time client receive only relevant portion of the enterprise policy and applies it to various components within the client, then all components of client at any given time uses the same policy and thus are in same state]**

Regarding **Claim 26**, the rejection of claim 21 is incorporated and further Bhide discloses that determining comprises evaluating the process-driven security policy of an electronic document at the server computer based on at least the security policy restrictions for the current state of the process-driven security policy for the electronic document **(Paragraph 0031 lines 3-10, "The Execution Model detects the occurrence of events. It also checks the truth-value of the conditions attached to the policies and depending on the truth-value, it executes the inference rules 18 as well as the access enforcement part 20 of the policy 10. The access Validation model 46, provides an interface to the end-user 52 to access data from the underlying databases or information repositories 54")**

Regarding **Claim 28**, claim 28 is "computer readable medium" claim analogous to "method" claim 21. Claim 28 is rejected based on the same rationale as the rejection of claim 21.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh Paliwal whose telephone number is (571) 270-1807. The examiner can normally be reached on M-F: 7:30 AM - 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian P. Werner can be reached on (571) 272-7401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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1/31/2007

BRIAN WERNER
SUPERVISORY PATENT EXAMINER